



October 29,, 2008

Ms. Khesha Jennings
Manager, Heavy Duty and Nonroad Engine Group
Compliance and Innovative Strategies Division
Office of Transportation and Air Quality
Environmental Protection Agency
1200 Pennsylvania Ave. NW
Mailcode 6405J, Washington, DC20005

Dear Ms. Jennings,

Please find attached the On-Board Diagnostics II System Certification Documents for the 2009 Engine Model Year Diesel Engine for use in 2009.5 Vehicle Model Year Medium Duty Dodge Chassis Cab Truck. It is submitted for your review and approval for fulfillment of the On-Board Diagnostic (OBD) II requirements for a 2009.5 Model Year vehicle with a 2009 Model Year engine. This OBD system is used on the following engine family: 9CEXH0408BAA

The certification documents included in this submission are, the engine OBD certification document, and the AECD document. **CBI/ Ex. 4** There are

CBI/ Ex. 4

CBI/ Ex. 4 Please see Section 1.0 in "2008-10-29 EPA Cover Letter and Attachment.doc" for details. An electronic copy of this cover letter is in the file "2008-10-29 EPA Cover Letter.doc".

CBI/ Ex. 4

Please address the approval letter for this On-Board Diagnostic II system application to Mr. Mark Stepper at Cummins Inc. If there are any questions about this request for approval please contact me at (812) 377-0625 via telephone or at hwei.jen.kachler@cummins.com via email or Mr. Mark Stepper at (812) 377-5729 via telephone or at m.r.stepper@cummins.com via email.

Thank you for your assistance.

Sincerely,
Hwei Jen Kachler
Senior Engineer
On Board Diagnostics & Service Information Certification
Product Environmental Management

Cc: Mark Stepper, Grey Orehowsky, Jason Gumbs, Arvon Mitcham, Paul Mendrick, Paul McAvoy, Victor Schneider, Shanila Bhatti, Ben Zwissler, Hal Zatorski,

Attachments:

Cummins Inc.
500 Jackson Street
Columbus, IN 47201 USA
Phone 1 812 377 5000
cummins.com

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OBD Certification Document Attachment

1. File name: "CBI/ Ex. 4 .zip"
2. File name: "CBI/ Ex. 4 .ppt"
3. File name: "CBI/ Ex. 4 .ppt"
4. File name: "CBI/ Ex. 4 .zip"
5. File name: "CBI/ Ex. 4 .ppt"
6. File name: "2008-10-29 EPA Cover Letter and Attachment.doc"

1.0 Significant Changes from the Previous Submittal

Calibration and Certification Document Updates:

- EGR Low Flow Redesign to improve robustness – P0401 (Section 4 and 6)
 - EGR Low Flow deficiency resolution was approved by ARB during the teleconference on August 19th, 2008. An additional enable criteria has been added to the monitor to improve the robustness of the diagnostic.
- Vehicle Speed Sensor Concern Resolution – P0501 (Section 4)
 - This update is to address ARB's concern on excessive fail criteria for vehicle speed sensor from the previous model year. Vehicle Speed Sensor algorithm has been modified to robustly detect a failed sensor and avoid false failures.
- Pilot fueling compensation for Fuel Pressure Idle Diagnostic – P0191 (Section 6)
 - This update is to address P0191 false failures of the MY08.5 Chassis Cab product.

Calibration update only:

- Intake Manifold Temperature Service Mode\$02 update (See attached "IMT Mode02 Issue.ppt" for details)
 - Software change to correct IMT Service Mode\$02 data report

2.0 Information Not Currently Available

Cummins plans to gradually add the remaining flow charts in future submission.

3.0 Deficiencies and Concerns from the Previous Model Year Engine

Some of the following Deficiencies/Concerns identified by ARB are not applicable to the EPA certified product. However, Cummins includes all of these California identified Deficiencies and Concerns for your information. Cummins has resolved all deficiencies for the E-MY08 products.

3.1 Deficiencies (E-06-194, E-06-195)

Un-resolved:

- None

Resolved:

- Thermostat Monitoring
 - Cummins has resolved this deficiency for the V-MY08 products.
- Exhaust Gas Temperature Sensor Monitoring
 - Cummins has resolved this deficiency for the V-MY08 products by making OOR low detection immediate, significant reduction in OOR high detection time, and addition of a three-way reference between EGT sensors for intermittent OOR high detection.

- Charging System Monitoring
 - Cummins has resolved this deficiency for the V-MY08 products by removal of charging system input enable criteria to idle rail pressure rationality monitor.
- Reporting of test results issue
 - Deficiency was removed for the V-MY08 per March 30th meeting.
- In-use performance ratio reporting issue
 - Deficiency was removed for the MY08 per prior conference call meeting agreement.
- Aisin Transmission
 - Deficiency was removed per MY08 Aisin OBD certification document.
- EGR Monitoring
 - Cummins has resolved this deficiency per August 19, 2008 conference call meeting with ARB. This fixed will be implemented in the V-MY09.5 product.

3.2 Concerns

Un-resolved:

- Temperature Sensor Rationality Monitoring (E-06-132)
 - Cummins plans to resolve this concern in the E-MY2009 products.
- Fuel Rail Pressure Sensor Rationality Monitoring (E-06-132)
 - Idle Speed Control System Monitor (P0505 MIL) added to address concern with enable criteria based upon engine speed. Remaining ARB concerns relative to a failure criteria adjustment based on battery voltage to be addressed in future model year per discussion on Charging System Deficiency removal. Cummins plans to resolve this concern in the E-MY2008 products. Cummins plans to present a PowerPoint presentation and reviewed it with ARB in April 2008.
- Fuel System Fault Codes (E-06-132)
 - Cummins has resolved this concern for the MY2008.5 products; however, Cummins is expected to implement the standardized DTC in E-MY2010 products.
- Fuel Injector Tolerance Coding (E-06-132)
 - Cummins will submit a plan to address this concern prior to the E-MY2013.
- Exhaust Gas Temperature Sensor Monitoring (E-06-132, E-06-194)
 - Concern stated in E-06-132 with 196 accumulated miles required for fault detection. Cummins has reduced malfunction criteria to 50 miles for this submission. Cummins plans to resolve this concern in the E-MY2010 products.
- Vehicle Speed Sensor Monitoring (E-06-132)
 - Cummins plans to resolve this concern in the E-MY2009 products.
- Intake Manifold Air Temperature Sensor Monitoring (E-08-003)
 - Cummins plans to resolve this concern in the E-MY2010 products.
- Intake Manifold Pressure Sensor Monitoring (E-08-003)
 - Cummins plans to resolve this concern in the E-MY2010 products.
- Reporting Monitoring Results (Service Mode06) (E-08-003)
 - Cummins plans to resolve this concern in the E-MY2010 products.